

# Public Health Reports

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## ANNOUNCEMENT

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### COMPETITIVE EXAMINATIONS FOR THE REGULAR CORPS OF THE UNITED STATES PUBLIC HEALTH SERVICE

Competitive examinations will be held early in 1947 for appointment to the Regular Corps of the United States Public Health Service. Seventy-five vacancies exist in grades of assistant and senior assistant scientist.

Written examinations, covering each candidate's particular field of science, as well as related fields, will be held April 14 and 15 at places mutually convenient to the applicant and the Service. Oral examinations will be held during the period February 13–April 9 in 30 cities strategically located throughout the United States.

Commissions are available to scientists trained in any of the following fields: bacteriology, mycology, parasitology, entomology, malacology, biology, chemistry, physiology, physics, statistics (mathematical, demographic, etc.), psychologists, and milk and food specialists. Assignments will be in line with the individual's demonstrated ability and experience.

An applicant for the grade of assistant scientist must be a citizen of the United States, have 7 years of educational and professional training or experience, possess a certificate or diploma from an institution of recognized standing, and be able to pass a physical examination given by a medical officer of the United States Public Health Service. The same requirements, plus an additional 4 years of training or experience, apply to those seeking the grade of senior assistant scientist.

Commissioned officers in the Regular Corps enjoy the same benefits and privileges as do officers of the Army, Navy, or Marine Corps. The grade of assistant scientist is equal to that of first lieutenant in the Army. Annual pay, with allowances for dependents, is \$3,811. A senior assistant scientist ranks with a captain of the Army and draws, with allowances for dependents, \$4,351 a year.

United States Public Health Service officers are entitled to full medical care and hospitalization for themselves and their families, including disability retirement at three-fourth's base pay. They receive 30 days annual leave with pay. Periodic promotions are based upon length of service and merit. The retirement age is 64.

Application forms and additional information may be obtained by writing the Surgeon General, United States Public Health Service, Washington 25, D. C.

(1869)

## Places and dates of oral examination:

Atlanta, Ga.—USPHS Communicable Disease Center, 605 Volunteer Building.	Feb. 13.
Austin, Tex., University of Texas.....	Feb. 15.
Baltimore, Md.—Marine Hospital, Wyman Park Dr. and 31st St.	Apr. 8.
Boston, Mass.—Marine Hospital, 77 Warren St. (Brighton)....	Apr. 1.
Chicago, Ill.—Marine Hospital, 4141 Clarendon Ave.....	Mar. 18 and 19
Cleveland, Ohio—Marine Hospital, Fairhill Rd. and East 124th St.	Apr. 3.
Columbia, S. C.—USPHS Malaria Research Laboratory, State Hospital.	Mar. 11.
Columbus, Ohio—Ohio State University (Pharmacology and Bacteriology Bldg.).	Apr. 4.
Denver, Colo.—USPHS District No. 8, Room 615, Colorado Bldg.	Feb. 25.
Detroit, Mich.—Marine Hospital, Windmill Pointe.....	Mar. 21.
Eugene, Oreg.—University of Oregon.....	Feb. 21.
Iowa City, Iowa—State University of Iowa (Physics Bldg., Room 205).	Mar. 17.
Kansas City, Mo.—USPHS District No. 7, Room 603, B. M. A. Bldg.	Mar. 15.
LaFayette, Ind.—Purdue University (Stanley Coulter Hall, Room 6).	Mar. 20.
Los Angeles, Calif.—USPHS Relief Station, Room 406, Federal Bldg.	Feb. 18.
Louisville, Ky.—Marine Hospital, Portland Ave. and 22d St....	Mar. 13.
Minneapolis, Minn.—University of Minnesota Medical School..	Feb. 27.
Nashville, Tenn.—Vanderbilt University Medical School.....	Mar. 12.
New Orleans, La.—Marine Hospital, 210 State St.....	Feb. 14.
New York, N. Y.—USPHS District No. 1, SubTreasury Bldg., 15 Pine St.	Mar. 31.
Omaha, Nebr.—Creighton University.....	Feb. 26.
Pittsburgh, Pa.—University of Pittsburgh.....	Apr. 5.
Raleigh, N. C.—North Carolina State Health Department.....	Mar. 10.
Rochester, N. Y.—University of Rochester.....	Apr. 2.
St. Louis, Mo.—Marine Hospital, 525 Couch Ave., Kirkwood..	Mar. 14.
Salt Lake City, Utah—University of Utah.....	Feb. 24.
San Francisco, Calif.—Marine Hospital, 14th Ave. and Park Blvd.	Feb. 19 and 20.
Seattle, Wash.—Marine Hospital, Judkins St. and 14th Ave. South.	Feb. 22.
Tucson, Ariz.—University of Arizona.....	Feb. 17.
Washington, D. C.—USPHS Dispensary, 4th and D Sts. SW....	Apr. 9.

## THE STORY OF THE NATIONAL LEPROSARIUM

THE UNITED STATES MARINE HOSPITAL, CARVILLE, LOUISIANA

By G. H. FAGET, *Medical Director (Medical Officer in Charge), United States Public Health Service*

### INTRODUCTION

Leprosy is one of the oldest diseases of the human race, its origin lost in antiquity. Yet for centuries it has been one of the most misunderstood and dreaded diseases of mankind. Any person who became afflicted with leprosy was condemned to a hopeless life of isolation. Even to the present day an unjustified fear of leprosy lingers among the general public.

But there is no cause for this leprophobia. The fact is that leprosy is an infectious, mildly contagious disease, which is transmitted from the sick to the well in some uncertain manner. It is not so contagious as tuberculosis, yet people have less fear of contact with a tuberculous person. The danger of exposure to leprosy is slight and not sufficient to warrant the widespread terror of earlier times.

It is noteworthy that leprosy is most feared in countries where the disease is scarce and the danger of contagion relatively insignificant, whereas in certain tropical countries, where leprosy is most prevalent and the risk of contagion greatest, it is generally regarded with indifference by the natives. This illustrates the adage that familiarity breeds contempt, for in such countries, those afflicted with leprosy are seldom prevented from mingling with the public.

Although there is little danger of contracting leprosy in most civilized nations, where it is a rare disease, it must be admitted that the only sure means of eradicating leprosy from any land is segregation. In the absence of a specific curative remedy and of the knowledge of the exact mode of transmission, the isolation of infectious cases is the only means of controlling the disease. Voluntary segregation should be encouraged, because compulsory segregation, since it conflicts with human freedom, often fails. The modern leprosarium should have special attractions for the prospective patient, and no expense should be spared for his comfort and welfare. Primarily, it should be a hospital and a home, not an asylum. Every effort should be made to permit the leading of a normal life.

The public should know that recent improvement in the treatment of leprosy renders it no longer a hopeless disease. Moreover, early voluntary admission greatly enhances the patient's chance of discharge from the institution in restored health. An ever-increasing number of patients is being discharged from leprosariums as "arrested cases" and no longer a menace to the public.

Although leprosy is one of the oldest known diseases, it was not until 1873 that its causative agent, the "leprosy bacillus," was discovered by the Norwegian scientist, G. Armauer Hansen. Prior to that time, the disease had been confused with other conditions; now it can be identified more easily.

#### LEPROSY IN THE UNITED STATES

The origin and spread of leprosy in the United States is most interesting. Following its introduction from foreign lands, it generally did not spread, finding unfavorable soil in the native-born population of most localities. The State of New York is a good example of this relative immunity of the population. Five or six cases of leprosy are encountered there annually. The board of health institutes a thorough investigation of each reported case. It has been found that, with possibly one or two exceptions, leprosy has never originated in New York State. Leprosy in New York and most other Eastern States is an imported disease. In the majority of cases the infection has been traced to the West Indies, South America, the European nations bordering the Mediterranean, and other infected countries.

In the central and northern States, only occasional cases of leprosy have been found, usually among immigrants. Minnesota, Iowa, and Wisconsin have been an exception to this rule. There leprosy was introduced by Norwegian and Swedish settlers in the middle of the 19th century. Altogether, between 160 and 200 Scandinavians afflicted with leprosy settled in these States, the largest number of them in Minnesota. Although no new cases of leprosy developed in the Scandinavian settlement during the first 50 years, seven new cases occurred between 1895 and 1916, most of them in families of the imported cases. None have occurred since then, showing that, although the disease spread temporarily in Minnesota and the neighboring States, it did not thrive there and soon was extinguished.

Leprosy is constantly being introduced into California and the other Pacific Coast States by Chinese immigrants, as well as by Filipinos and Hawaiians. Most of these immigrants are in the latent stage of the disease upon entering the country, and leprosy may not manifest itself until years later. In the southern part of California, the disease is introduced by Mexicans. So far, comparatively few native-born Californians have contracted leprosy in California. These number 21 or 22 cases among the 233 patients admitted to the Carville leprosarium from that State.

Geographically, we recognize the Gulf Coast States as the most active focus of leprosy in the United States. Here, especially in certain parts of Florida, Texas, and Louisiana, leprosy has become a public health problem.

The origin of leprosy in Florida can be traced to the early Spanish settlers and their imported African slaves. Romans's history of Florida, written in 1776, describes the existence of leprosy among the Negroes of that State. Since then, the disease has no doubt also been imported from Cuba and other islands of the West Indies. In certain parts of Florida, leprosy has become endemic and is being slowly transmitted from one generation to the next.

In Texas, leprosy has established a foothold, mostly along the Rio Grande. The early cases in this State came from Mexico, but today the disease is communicable on Texas soil. The records of the United States Marine Hospital at Carville, La., indicate that 226 cases of leprosy were admitted from Texas and that there were 171 natives of that State admitted, most of whom were infected in Texas.

Today there is a greater incidence of leprosy in proportion to population in Louisiana than in any other State of the Union. Two possible sources of leprosy in Louisiana were considered by that eminent student of leprosy, Isadore Dyer. These were: importation from the West Indies, and origination among the Acadians, who came from Canada between 1756 and 1760. The former is the more probable source of the two.

#### THE LOUISIANA LEPER HOME

Although leprosy continued to spread in southern Louisiana, particularly among the Acadian descendants, it was not until 1894 that any constructive action was taken against the disease. In that year the State legislature passed an act creating a board of control, whose function was to provide a home for sufferers of leprosy. By the end of the year, a temporary site had been leased for 5 years in Iberville Parish. This was the old Indian Camp Plantation, about 80 miles up the Mississippi River from New Orleans.

On November 30, 1894, eight patients were transported from New Orleans by night on a coal barge towed by a tug. The next morning they arrived at their new home. About a year after the opening of the home, the board of control, realizing that the patients were not receiving sufficient attention, requested the Sisters of Charity to care for them. A contract was drawn up between the Community of Sisters and the State of Louisiana, whereby the Sisters assumed the gratuitous domestic charge and nursing care of the patients. Four Sisters volunteered their services and came to stay with the patients. The Sisters took up residence in the old colonial home of the abandoned plantation, and the patients were housed in the old slave cabins. This was a temporary arrangement while a site more convenient for administrative purposes was being sought nearer New Orleans.

In 1900, the State legislature appropriated a sum of money sufficient for the purchase of such a site and the building of a leprosarium. Unfortunately, misguided neighbors were so strongly opposed to this plan that, when the transfer of the patients was proposed, they burned the buildings.

Thereafter, attempts to find a new location for the leprosarium were abandoned and, instead, new cottages housing 10 patients each were constructed on the plantation to replace the old slave shacks. Gradually, suitable housing to accommodate comfortably a hundred patients and a new building for use as a dining room and kitchen were provided. This was the condition of the efficiently functioning Louisiana Leper Home in 1920, when the Federal Government negotiated to take it over.

Many years previously the Federal health authorities had already become aware of the necessity for more stringent measures to check the progress of leprosy in the United States. A committee of experts testified before Congress that leprosy existed in practically every State of the Union, that the disease had been present for a number of years, that it was on the increase, and that the only known means of effectively controlling it was segregation. By 1916 the information gathered through scientific investigation in previous years had been compiled; it indicated the advisability of Congressional provision for a home where all persons afflicted with leprosy might be cared for and treated.

However, not until February 3, 1917, did Congress enact legislation and provide funds for the establishment of a national leprosarium to be under the administration of the United States Public Health Service.

Because of World War I, action on this legislative measure was postponed for several years. Then a committee of Public Health Service officers was appointed to select a suitable site for the proposed leprosarium. Great difficulty was experienced in this task. No State cared to cede territory to the Government for use as a sanatorium for leprosy. Finally, the matter was settled by purchasing from the State of Louisiana on January 3, 1921, the property occupied by the Louisiana Leper Home.

#### THE NATIONAL LEPROSARIUM

The State of Louisiana then transferred the patients, hospital, and grounds to the United States Public Health Service. At a flag-raising ceremony, the national leprosarium was officially opened on February 1, 1921, with O. E. Denney as its first medical officer in charge. There were at that time 90 patients in the home. It immediately became necessary to enlarge and rehabilitate the existing

buildings, because of the expected rapid increase in population. Soon new patients were admitted from many States, and the census of the institution quickly rose to 172.

On March 4, 1923, the sum of \$645,000 was appropriated by an act of Congress in order to expand further the capacity of the leprosarium. This building program was completed in 1924, when housing facilities for approximately 425 patients became available.

The act of Congress of February 3, 1917, authorizing the construction of the national leprosarium, had directed the Surgeon General of the Public Health Service to prepare rules and regulations for the type of patients to be admitted. These regulations stipulated that there should be admitted to the leprosarium:

(1) Any person afflicted with leprosy who presents himself or herself for care, detention, and treatment, or

(2) Who may be apprehended under authority of the United States quarantine acts, or

(3) Any person afflicted with leprosy duly consigned to said home by the proper health authorities of any State, Territory, or the District of Columbia.

Leprosy was the first disease for which the United States Government made specific regulations pertaining to the transportation of infected persons. Since 1912 the Interstate Quarantine Regulations have provided rules for the safe transport of persons who present symptoms of leprosy.

After the necessary State permits are received, patients are transferred to the leprosarium accompanied by a medical officer of the Public Health Service. A compartment is provided for the patient, who is strictly isolated during the trip. All dishes and utensils are disinfected before leaving the compartment, all secretions or discharges are disinfected and properly disposed of, and the space occupied is disinfected upon being evacuated by the patient. As now practiced by the Public Health Service, the transportation of persons with leprosy is effected without exposing the public to any danger of infection.

In this country, there is evidence that the greatest menace of leprosy is to the health of the other members of an afflicted person's household. The risk of contagion is considerable, especially to children, in the intimacy of the family circle. It has been estimated authoritatively that a patient can expect that approximately 10 percent of the members of his family who continue to live with him will develop the disease. This should be an inducement for him to seek early hospitalization. He should realize that one of the greatest boons of his segregation in a leprosarium is the protection it insures his loved ones at home. The high incidence of leprosy in certain families is well demonstrated

in the records of the Carville Marine Hospital and has frequently been commented upon by certain writers and experts on the subject. The concealment of a person with leprosy by his family often strikes home again, as it may lead to the infection of other members of the family. Concealment and transmission of leprosy within the family group seems an important factor in keeping the disease alive in this country. On the other hand, the rather feeble contagiousness of leprosy among nonrelatives is striking. At the Carville leprosarium, during the 51 years of its operation, only one case of leprosy developed among the employees, in spite of their continued proximity to the patients. This is a good record and shows the feebleness of communicability of the disease when ordinary precautions are taken.

#### RECENT IMPROVEMENTS IN THE NATIONAL LEPROSARIUM

Until recently, most of the buildings of the Federal leprosarium at Carville were of wooden frame structure and therefore a fire hazard. Starting in the spring of 1940, at a cost of approximately \$2,500,000, the Government undertook to rebuild the institution almost completely, in order to make it fireproof. This building program was completed by the end of 1941. Facilities have been increased to take care of 480 ambulatory patients, in addition to the 65 hospital rooms for bed patients. At present, the leprosarium at Carville can be considered the finest and most modern in the world.

The visitor who approaches the Federal leprosarium at Carville for the first time is surprised to see such imposing buildings in an otherwise rural district. After he enters the reservation of 350 acres, he is impressed by the fact that it is a self-sustaining community, resembling a small town. There is a power plant for the generation of electricity, the manufacture of ice, and the operation of a central steam-radiator heating system. A modern sand-filtration plant with attached chlorinating apparatus furnishes over 200,000 gallons of potable water a day. Both hot and cold water is piped to all the buildings of the colony. The water consumption per capita is above that of most large cities in the United States. This meets with the approval of the administrative force, since cleanliness is conducive to health and the source of supply, the Mississippi River, is inexhaustible. There are two modern sanitary laundries, one for the patients, the other for the personnel. A large sanitary dairy with pasteurization and cold-storage facilities produces 180 gallons of grade A milk a day. Cattle are raised to furnish beef products. Protestant and Catholic churches and their respective resident chaplains afford the patients religious comfort. A well-equipped fire department is ready to function at all hours. The sewage system with its septic tanks and the incinerator plant for the disposal of garbage assure the complete sanitation of the community and pro-





FIGURE 1.—Airplane view of the National Leprosarium, Carville, La.



FIGURE 2.—A patient's bedroom.



FIGURE 3.—New nurses' home.



FIGURE 4.—Patients' bandstand.

tection of the neighboring public. An extensive drainage system demands constant attention to prevent a mosquito nuisance and a possible malaria menace. Besides the numerous buildings for the use of the patients and the large nurses' home, there are 25 residences for doctors, administrative and clerical personnel, mechanics, and other employees. All the personnel are employees of the Federal Government; there are no volunteer workers. Paved roads connect the different parts of the reservation.

Passing from the personnel to the colony side of the estate, the visitor comes first to the hospital, where the bed patients are treated. This is a two-story concrete building containing 44 rooms for men and 21 rooms for women patients. In addition, it contains a first-class operating room, an adequate X-ray department, a dental clinic, a bacteriologic and pathologic laboratory, a physiotherapy department, dressing-room clinics for men and women, offices, and examining rooms.

The ambulatory patients, who are by far in the majority, are domiciled in 16 two-story concrete buildings. Each of these buildings contains, on each floor, 15 individual bedrooms, bathrooms, a reception room, and front and back porches. The front porches are connected upstairs and downstairs by concrete passageways, screened and covered for the protection of the patients in going about the colony.

Every effort has been made to provide the patients with the comforts of home. For the most part, they are contented and well satisfied with all that is being done for them. They can pursue their avocations and enjoy a variety of community activities. Each patient has his own room with adequate modern fireproof furniture. He may arrange and decorate his room to suit his taste. Visitors are allowed daily from 7 a. m. to 7 p. m. Under certain conditions patients are permitted to visit their homes for periods of 10 days to 2 weeks, twice a year. There are no restrictions in correspondence with relatives or friends except that all outgoing mail is disinfected.

On each side of the hospital is a building for occupational therapy. Each of these two-story buildings has 18 rooms. These rooms are used, respectively, as sewing room, music room, school room, photography room, barber shop, tailor shop, pressing shop, carpenter shop, shoemaker's shop, bicycle-repair shop, radio-repair shop, rooms for various other arts and crafts, and finally the printing offices of the patients' local paper, "The Star." This is an interesting monthly periodical, the purpose of which is "radiating the light of truth on Hansen's disease." It contains many splendid articles from the pens of patients. Its outside circulation is increasing and has now reached 2,500.

Occupational therapy in its different forms is a useful part of the patients' treatment. Occupation has a good moral effect upon the

patient; it prevents his brooding upon his malady. The employment of 112 patients on a small salary basis by the Government serves the same purpose. It also affords them ready cash for the purchase of the little luxuries not furnished by the Government. The Government provides all patients with food, clothing, toilet articles, books, magazines, newspapers, a golf course, tennis courts, baseball, basketball, and other sporting equipment, and three motion-picture shows each week.

The new recreation building has filled a long-felt need at the National Leprosarium. This beautiful, spacious, two-story structure is the feature of the new construction program which has pleased the patients most. It cost approximately \$140,000 and was well worth the price for the recreational facilities it affords this group of shut-in citizens from practically every State of the Union. A modern motion-picture theater, a canteen operated by patients for the benefit of the patients, smoking rooms for men and women, a pool room, and a splendid library with many excellent books are on the first floor. On the top floor is a huge ball- or concert-room with an orchestral platform on one side. Here frequent dances are given by the patient body. Baton Rouge and New Orleans bands come to play the latest swing music. Between dances the floor space is used for indoor games such as ping-pong, darts, shuffleboard, bingo, cards, and dominoes.

The patients are served their meals cafeteria style at 7 a. m., noon, and 5 p. m. The dining room adjoins a clean, well-equipped kitchen. Menus are carefully planned; the food is well cooked, tasty, and nutritious. The meals served can be compared to those of a first-class hotel. Food plays a direct part in the fight against the disease, and no effort is spared to provide the best.

#### ACTIVITIES OF THE NATIONAL LEPROSARIUM

The medical, surgical, and nursing services are qualified to cope with the disease. The nursing is in the hands of 21 Sisters of Charity, some of whom were retained by the Federal Government from the Louisiana State regime. The Sisters are graduate nurses and have always given satisfactory service. The patients appreciate their gentle manner and tender nursing care.

The medical staff consists of six medical officers, one dentist, and three consultants from New Orleans. The consultants are specialists in dermatology, orthopedics, and neuropsychiatry and make monthly visits to the institution.

In addition to keeping up with all new developments in general medicine, the medical staff specializes in leprosy. The medical library is well stocked with books and medical journals dealing with the subject.

Besides general institutional care, the patients are given any special treatment which may be thought beneficial to their condition. With few exceptions, all of the patients take some form of treatment. During the last fiscal year, a smaller number of patients than usual were taking chaulmoogra-oil treatment either by mouth or by intramuscular injections. Since chaulmoogra oil and its derivatives have not proved to be specifics for leprosy, their popularity is declining. The impression, however, persists that chaulmoogra-oil products are of some benefit in certain types of the disease and so continue to be used in those cases.

Several new experimental treatments have recently been undertaken on a number of patients. Diphtheria toxoid, for which enthusiastic claims were made elsewhere, was subjected to an extensive study in a carefully-controlled experiment on a large group of patients. The results were disappointing.

Vaccine and serum therapies have been tried and have proved unsatisfactory. Penicillin also has proved unsuccessful.

Vitamin therapy has been given an extensive trial. Multiple vitamins have been found useful for their general tonic effect. Massive doses of vitamin A and of vitamin D did not produce any direct effect on leprous lesions. Vitamin B<sub>1</sub> (thiamin chloride) in large doses was found efficacious in relieving painful leprous neuritis. Riboflavin (vitamin B<sub>2</sub>) was used in certain leprotic eye manifestations, but without definite benefit. Pyridoxine (vitamin B<sub>6</sub>) has been helpful in symptomatic relief of some debilitated patients.

The most outstanding scientific advance made at the National Leprosarium has been the discovery of the beneficial effects of the sulfone drugs in the treatment of leprosy. These new drugs, promin, diasone, and promizole, are at present the treatment of choice and are rapidly replacing chaulmoogra oil in this hospital.

Promin, after more than 4 years' experience, is now considered to be a chemotherapeutic agent of established value. Diasone, after more than 2 years' use, is beginning to prove as effective as promin. Promizole, used on a smaller scale for only 1 year and still considered to be in the experimental stage, is already showing favorable therapeutic action.

The good results of the sulfone drugs are reflected in the increased number of patients discharged during the last fiscal year in comparison with the numbers for previous fiscal years. Thirty-four patients were discharged with arrested disease last year, approximately twice the usual annual number. The increase in the number of patients discharged last year can be attributed largely to sulfone therapy. Thirteen of these discharged patients reached the clinically and bacteriologically negative stage after 2 to 4 years of promin treatment and one patient after 1½ years of diasone treatment.

Although the above results are extremely encouraging, the search for a more rapidly acting specific remedy continues. Streptomycin, now under thorough clinical investigation at the National Leprosarium, may or may not prove to be the long-sought solution to this baffling ancient problem.

Besides special medication during institutional treatment, attempts are made to discover and remove any intercurrent disease which might react unfavorably upon leprosy. The eye, ear, nose, and throat complications of leprosy are frequent and require energetic treatment. A full-time specialist devotes all of his time to this work. He is able to give relief to the patients and prevent some disabling conditions from developing.

The physiotherapy department is a busy service. Approximately 15,000 treatments are given yearly in electrotherapy, thermotherapy, hydrotherapy, and massage. These various forms of physiotherapy are found useful in relieving nerve pains, restoring muscular functions, and healing ulcerations.

In the dental clinic, a dentist and his assistant keep the patients' mouths and teeth in hygienic condition. This helps them in regaining their health.

The laboratory is equipped for scientific research in the various phases of leprosy. In connection with it there is a well-kept animal house for guinea pigs, rabbits, mice, rats, opossums, and Syrian hamsters, which are used for experimental purposes. Attempts at the reproduction of leprosy in these various laboratory animals are being continued. A full-time bacteriologist conducts these research experiments.

The dermatologic, orthopedic, and neuropsychiatric clinics are well attended. They supplement the other medical activities of the hospital and afford the patient expert professional advice in these specialties.

The Carville Marine Hospital, being the only leprosarium in the United States, serves as a center for the dissemination of knowledge on the subject of leprosy. Numerous letters of inquiry are received and answered annually.

The institution is also used as a postgraduate instructional center on leprosy. During the past year, 295 doctors, 6 dentists, and 217 nurses visited the station, seeking clinical information on the disease. Some of the visiting physicians came from distant States and several from foreign countries. The postgraduate class in tropical medicine of Tulane University attended a clinical demonstration on leprosy at Carville. Members of the medical staff of the Carville leprosarium went to New Orleans to lecture to these doctors on different aspects of the disease. Every year leprosy clinics are attended by the senior medical students of Louisiana State University and of Tulane Univer-

sity and by the senior dental students of Loyola University, all of New Orleans. It is felt that this practical experience will aid these doctors in the earlier diagnosis of leprosy in their future medical careers.

#### STATISTICAL DATA

During the period of State control, 338 patients were admitted, all but 16 of them from Louisiana. Ninety of these patients were in the State hospital on February 1, 1921, when the Federal Government took charge, and were transferred to the National Leprosarium. From February 1, 1921, to January 1, 1946, 1,179 patients were admitted, making a total of 1,517 admissions since December 1, 1894. Of this number, 685 have died at the hospital, 54 have been deported to foreign countries, and 354 have been discharged as arrested and no longer a menace to public health. Seventy-one of these have relapsed and returned to the hospital for further treatment.

Of the total admissions, 448 were foreign-born, the largest number (172) coming from Mexico. All patients, of course, were in the United States when their disease was discovered. Among the States from which patients were admitted, Louisiana leads with 613, California follows with 227, Texas is third with 226, New York fourth with 131, and Florida fifth with 80. All other States have sent a total of 240. Patients have been received from 41 States, the District of Columbia, the Philippine Islands, Hawaii, and the Canal Zone.

Table 1 shows the nativity of patients admitted during the past 10 years.

TABLE 1.—*Nativity of patients (calendar year)*

Nativity	Year									
	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
United States.....	17	23	26	26	41	29	25	19	23	20
Insular possessions.....	2	3	1	3	6	1	5	2	3	4
Other countries.....	7	14	11	14	15	12	11	13	16	5
Total.....	26	40	38	43	62	42	41	34	42	29

In Table 2 is given the number of men and women in the hospital at the end of each year during the past 10 years.

TABLE 2.—*Number of patients in hospital (calendar year)*

Cases	Year									
	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Male.....	274	258	239	248	246	249	258	261	260	251
Female.....	113	113	113	116	131	123	122	123	120	118
Total.....	360	371	352	364	377	372	380	384	380	369

Table 3 gives the number of patients discharged as "arrested" and no longer a menace to public health during the last 10 fiscal years, each year ending on June 30 of the year given in the table.

TABLE 3.—*Patients discharged from leprosarium (fiscal year)*

Discharged as "arrested"	Year									
	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
Male.....	16	11	12	11	8	5	6	13	11	22
Female.....	5	7	5	2	6	5	5	7	2	12
Total.....	21	18	17	13	14	10	11	20	13	34

### CONCLUSIONS

At present the Carville leprosarium is fully equipped for properly dealing with leprosy. There is an increasing local interest in the welfare of the patients. Achievements in treatment are growing more important each year, and discharges of "arrested" cases show a corresponding increase. It is felt that there is need for a more general education of the public in order that the unwarranted popular fear of leprosy may be replaced by a more enlightened attitude. There is need for replacement of the odious words "leprosy" and "leper," which are usually unjustly associated in the public mind with "unclean." The patients at Carville prefer to call their malady Hansen's disease. This name meets with the approval of the professional staff. In addition, a better education of persons afflicted with leprosy and their families is also necessary in order that more patients may seek voluntary admission during the early stages of the disease.

Everything possible should be done to encourage voluntary admission. Prospective patients should realize that early institutional care and treatment will give them a better chance of arresting the disease. Voluntary admission is the goal for which we strive. With the renewed hope offered by the new sulfone drugs, this goal is not beyond our reach.

### REFERENCES

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- (3) Dyer, I.: The history of the Louisiana Leper Home. New Orleans Med. and Surg. J., 54: 714 (May 1902).
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- (5) Faget, G. H., and Pogge, R. C.: Penicillin used unsuccessfully in treatment of leprosy. Internat. J. Leprosy, 12: 7 (December 1944).
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- (12) **Marshall, E. R.:** What the United States Public Health Service is doing to prevent the spread of leprosy in the continental United States. *Mil. Surg.*, **53**: 313 (October 1923).
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## CHANGES IN STATE AND TERRITORIAL HEALTH AUTHORITIES

### Change No. 4 to Directory of State and Territorial Health Authorities (Supplement No. 180 to Public Health Reports—1945 Revision)

The following changes and additions have been received since compilation of Change No. 3.<sup>1</sup> Notice of further changes should be addressed to the Records and Reports Unit, Bureau of States Services, United States Public Health Service, Washington 25, D. C.

#### ALASKA TERRITORIAL DEPT. OF HEALTH

Maternity, infant, and child (preschool) health services, and Crippled children's services:

(Delete: **N. Berneta Block, M. D., M. P. H., director**)

Division of Maternal and Child Health and Crippled Children's Services.

#### CALIFORNIA STATE DEPT. OF HEALTH

Malaria and mosquito control:

(Delete: **C. G. Gillespie**)

(Insert: **Arve H. Dahl, chief**)

Mosquito Control Section.

(Add:)

Miscellaneous activities:

Hospital inspection:

**J. B. Askew, M. D., chief**

Bureau of Hospital Inspection.

Hospital surveys:

**P. K. Gilman, M. D., chief**

Bureau of Hospital Surveys.

#### COLORADO STATE BOARD OF HEALTH

Crippled children's services:

(Delete: **Robert A. Downs, D. D. S., C. P. H., acting director**)

(Insert: **J. Burris Perrin, M. D., C. P. H., director**)

Division of Maternal and Child Health.

Maternity, infant, and child (preschool) health services:

(Delete: **Robert A. Downs, etc.**)

(Insert: **J. Burris Perrin, M. D., C. P. H., director**)

Division of Maternal and Child Health.

Dental services:

(Delete: "Acting" from title of **Robert A. Downs**)

Industrial hygiene:

(Delete: **Robert J. Owens, director**)

Division of Industrial Hygiene.

Venereal disease control:

(Delete: **Ward L. Chadwick, M. D., director**)

Division of Venereal Disease Control.

Miscellaneous activities:

Add:

Hospital inspection:

**J. B. Perrin, M. D., C. P. H., director.**

Division of Maternal and Child Health.

<sup>1</sup> Change No. 1 appeared in *PUBLIC HEALTH REPORTS*, **61**: 1386-1387 (Sept. 20, 1946); Change No. 2, **61**: 1544-1547 (Oct. 25, 1946); Change No. 3, **61**: 1701-1703 (Nov. 22, 1946).

**CONNECTICUT STATE DEPT. OF HEALTH****Vital records:**

(Delete: **William C. Welling**, director)

Bureau of Vital Statistics.

**Narcotic control:**

(Delete: **Arthur J. Rivard**)

(Insert: **Angelo A. Zurlo**, narcotic agent)

Division of Narcotic Control.

**Nutrition:****Add:**

**Helen J. Phaneuf**, chief nutrition consultant.

Division of Local Health Administration.

**DELAWARE STATE BOARD OF HEALTH****Communicable disease control, general:**

(Delete: **J. R. Beck, M. D.**, director)

Division of Communicable Disease Control.

**Tuberculosis control:****Field services:**

(Delete: **J. R. Beck, M. D.**, director)

Division of Communicable Disease Control.

**DISTRICT OF COLUMBIA HEALTH DEPT.****Add:****Cancer services:**

**D. L. Seckinger, M. D.**, assistant health officer, director

Cancer Control.

**Nutrition:**

**Ella Oppenheimer, M. D.**, director  
Bureau of Maternal and Child Welfare.

**IOWA STATE DEPT. OF HEALTH****Industrial hygiene:**

(Delete: **N. J. Corrozzo, M. D.**, acting medical director)

Industrial Hygiene.

**KENTUCKY STATE DEPT. OF HEALTH****Administration, general:****Personnel administration:**

(Delete: **Carl M. Gambill, M. D., M. P. H.**)

(Insert: **Sara C. Stice**, personnel officer).

**Communicable disease control, general:**

(Delete: **Fred W. Caudill, M. D., M. P. H.**, director)

Division of Epidemiology.

**Tuberculosis control:****Field services:**

(Insert: **Edward N. Maxwell, M. D., M. P. H.**, acting director)

Division of Tuberculosis.

**MARYLAND STATE DEPT. OF HEALTH****Administration, general:**

Accounting and financing, and

Personnel administration:

(Delete: **W. N. Kirkman**, chief)

(Insert: **James P. Slicker**, acting chief)

Division of Personnel and Accounts

**Add:****Cancer services:**

**C. H. Halliday, M. D.**, chief

Bureau of Communicable Diseases.

Maternity, infant, and child (preschool) health services:

(Delete: **Dean Roberts, M. D.**, chief)

(Insert: **Edward Davens, M. D.**, chief)

Bureau of Child Hygiene.

**Add:****Mental hygiene:**

**Edward Davens, M. D.**, chief

Bureau of Child Hygiene.

**MICHIGAN DEPARTMENT OF HEALTH****Local health administration:**

(Delete: **E. V. Thiehoff, M. D., M. P. H.**)

(Insert: **J. K. Altland, M. D.**, director)

Bureau of Local Health Services.

**Vital records:**

(Delete: **Gertrude Prenta**, acting director)

(Insert: **Stuart T. Friant**, director)

Bureau of Records and Statistics.

**OHIO DEPARTMENT OF HEALTH****Administration, general:****Personnel administration:**

(Delete: **A. M. Settles**)

(Insert: **James E. Bauman**, chief)

Division of Administration.

**Nutrition:**

(Delete: **Martha Koehne, Ph. D.**)

(Insert: **Susan P. Souther, M. D., M. P. H.**, chief)

Division of Child Hygiene.

**SOUTH CAROLINA STATE BOARD OF HEALTH****Public health education:**

(Delete: **Andrew Peebles**, assistant director)

(Insert: **James A. Hayne, M. D.**, director)

Division of Public Health Education.

**Sanitation activities:****Milk sanitation:**

(Delete: **H. B. Hiers**, principal sanitarian)

(Insert: **William Weston**, senior sanitary engineer)

Division of Sanitary Engineering.

Maternity, infant, and child (preschool) health services:  
 (Delete: **Robert W. Ball, M. D., M. P. H.**, director)  
 (Insert: **Hilla Sheriff, M. D., M. P. H.**, director)  
 Division of Maternal and Child Health.

#### VIRGINIA DEPARTMENT OF HEALTH

Crippled children's services:  
 (Insert: **G. W. Comstock, M. D.**, acting director)  
 Bureau of Crippled Children.

Tuberculosis control:  
 Field services:  
 (Insert: **G. W. Comstock, M. D.**, acting director)  
 Bureau of Tuberculosis Out-patient Service.

Venereal disease control:  
 (Insert: **E. M. Holmes, M. D.**, director)  
 Division of Venereal Disease Control.

#### WEST VIRGINIA STATE DEPT. OF HEALTH

(Delete: **Bruce H. Pollock**, Deputy State Health Commissioner)

Administration, general:  
 (Delete: **Bruce H. Pollock**, deputy State health commissioner)  
 (Delete: **F. L. Hungerford**, chief of business management and personnel officer)  
 (Insert: **Paul B. Shanks**, administrative assistant)  
 Fiscal Office.

Communicable disease control, general:  
 (Delete: **Charles C. Hedges, M. D.**, director)  
 Division of Communicable Diseases.

Industrial hygiene:  
 (Insert: **H. G. Bourne**, acting director)  
 Bureau of Industrial Hygiene.

Maternity health services:  
 (Delete: **Glenn A. Carmichael, M. D.**, director)  
 Division of Maternal and Child Hygiene.  
 Public health education:  
 (Delete: **Ruth Frantz**, director)  
 Bureau of Public Health Education.  
 Venereal disease control:  
 (Delete: **J. C. Hume**, acting director)  
 Bureau of Venereal Disease Control.

#### WISCONSIN STATE BOARD OF HEALTH

Cancer services:  
 (Delete: **Allan Filek, M. D., M. P. H.**, director)

Local Health Services.  
 (Insert: **H. M. Guilford, M. D.**, chief)  
 Bureau of Preventable Disease.

Public health education:  
 (Delete: **Ruth McConnell**, assistant health educator)  
 (Insert: **John Cullnan**, editor)  
 Health Education.

Public health nursing:  
 (Insert: **Janet Jennings, R. N.**, supervisor)  
 Bureau of Public Health Nursing.

School health services:  
 (Delete: **Amy L. Hunter, M. D., M. P. H.**, chief)  
 (Insert: **Catherine Campbell**, school health educator)  
 Bureau of Maternal and Child Health.

Venereal disease control:  
 (Delete: **Milton Trautman, M. D., M. P. H.**)  
 (Insert: **H. M. Guilford, M. D.**, acting chief)  
 Division of Venereal Disease.

Funeral directing and embalming, supervision of:  
 (Delete: **Allan Filek, M. D., M. P. H.**)  
 (Insert: **Paul Weis**, supervisor)  
 Division of Funeral Directors and Embalming.

Add:  
 Statistical services:  
**Vivian Holland**, statistician  
 Statistical Services.

## PREVALENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES

November 3-30, 1946

The accompanying table summarizes the prevalence of nine important communicable diseases, based on weekly telegraphic reports from State health departments. The reports from each State for each week are published in the PUBLIC HEALTH REPORTS under the section "Prevalence of Disease." The table gives the number of cases of these diseases for the 4 weeks ended November 30, 1946, the number reported for the corresponding period in 1945, and the median number for the years 1941-45.

### DISEASES ABOVE MEDIAN PREVALENCE

*Poliomyelitis*.—The number of cases of poliomyelitis dropped from 3,298 during the preceding 4 weeks to 1,581 during the 4 weeks ended November 30. The number was, however, 1.7 times the figure for the corresponding period in 1945 and more than 2 times the 1941-45 median. The Pacific section reported fewer cases than in 1945, but in all other sections the cases exceeded the 1945 incidence, and in all sections the numbers of cases were considerably above the 1941-45 median expectancy. While the peak of the current epidemic has been passed in all sections of the country and the rate of decline is about normal, there is still a relatively high number of cases of this disease being reported. The number of cases (1,581) was the highest reported for this period in the 18 years for which records have been kept in this form. States reporting more than 50 cases for the current 4-week period were: Illinois 162, New York 121, California 104, Missouri 79, Minnesota 78, Wisconsin 77, Texas 69, Iowa 67, Kansas 65, and Massachusetts and Indiana 52 each.

### DISEASES BELOW MEDIAN PREVALENCE

*Diphtheria*.—For the 4 weeks ended November 30 there were 1,514 cases of diphtheria reported, as compared with 2,624 for the corresponding period in 1945 and a 5-year (1941-45) median of 1,904 cases. For the fourth consecutive 4-week period the current number of cases for a 4-week period has been less than the number reported for any corresponding period in the 18 years for which these data are available in this form. Prior to the latter part of 1944 there had been a consistent decline in the incidence of this disease, but from that time until July 1946, inclusive, the number of cases for each 4-week period was higher than for the corresponding period in the preceding year, as well as higher than the preceding 5-year median for each period. The

largest decreases have occurred in the southern part of the country where the incidence of the disease has been highest. However, in the North Atlantic sections during the current 4 weeks the incidence was higher than in 1945, and also considerably above the seasonal expectancy in those sections.

*Influenza.*—The number of cases (8,662) of influenza reported for the current 4 weeks was less than 35 percent of the number reported during the corresponding 4 weeks in 1945, and 90 percent of the 1941–45 median. The incidence was below the normal seasonal expectancy in all sections except the West South Central; approximately 4,700 of the total cases in that section (5,139) were reported from Texas, where large numbers are nearly always reported. The 1945–46 epidemic was in progress at this time in 1945, and the 1941–45 median is represented by the 1941 figure, which was slightly above the normal incidence during the month of November; the 1939–44 median number of cases for the month of November was approximately 7,500 cases.

*Measles.*—The incidence of measles was also relatively low, 5,990 cases being reported for the 4 weeks ended November 30, as compared with 8,146 during the corresponding period in 1945 and a preceding 5-year median of 9,986 cases. The number of cases in the New England section was about 50 percent above the median and in the West South Central region the incidence was slightly above normal, but in all other sections the numbers of cases fell below the median expectancy.

*Meningococcus meningitis.*—For the 4 weeks ended November 30 there were 250 cases of meningococcus meningitis reported as compared with 397 for the corresponding period in 1945. The 1941–45 median was represented by the 1945 figure. The number of cases reported from each geographic section was below the seasonal expectancy. For the country as a whole the current incidence was the lowest for this period since 1941 when there were 145 cases reported.

*Scarlet fever.*—The incidence of scarlet fever (7,051 cases) during the current 4 weeks was 65 percent of the 1941–45 median (10,716 cases). The number of reported cases was relatively low in each geographic section of the country. In the West North Central, South Atlantic and West South Central sections the incidence was less than 50 percent of the 1941–45 median. For the entire country the current incidence was the lowest recorded for this period in the 18 years for which records have been kept in this form.

*Smallpox.*—The number of cases of smallpox continued at a relatively low level, the 16 cases reported for the 4 weeks ended November 30 being slightly below the 1945 incidence for the corresponding period, and about 35 percent of the 1941–45 median. In the East South Central section 3 cases were reported as against a preceding 5-year median of 1 case, but in other sections the number of cases was the same as the median or fell below it.

*Typhoid and paratyphoid fever.*—During the 4 weeks ended November 30 the number of cases of these diseases reported was less than 75 percent of the 1941–45 median expectancy. The incidence was slightly above normal in the New England and Pacific sections, but in all other sections the numbers of cases were relatively low. For these diseases the current incidence was the lowest in the 18 years for which these data are available.

*Whooping cough.*—Fewer cases of whooping cough were reported during the current 4-week period than occurred during the corresponding period in 1945, and the number of cases (7,703) was less than 80 percent of the 1941–45 median. The West South Central section reported a slight increase over the median, but a very significant decline in the number of cases was reported from each of the other eight geographic sections.

*Number of reported cases of 9 communicable diseases in the United States during the 4-week period November 3–30, 1946, the number for the corresponding period in 1945, and the median number of cases reported for the corresponding period, 1941–45*

Division	Current period	1945	5-year median	Current period	1945	5-year median	Current period	1945	5-year median
	Diphtheria			Influenza <sup>1</sup>			Measles <sup>2</sup>		
United States.....	1,514	2,624	1,904	8,662	25,381	9,627	5,990	8,146	9,986
New England.....	88	67	30	12	10	36	1,883	644	1,296
Middle Atlantic.....	164	77	119	42	76	76	1,402	1,992	1,992
East North Central.....	195	378	242	128	2,102	305	708	1,446	1,064
West North Central.....	125	207	159	22	1,701	95	121	222	570
South Atlantic.....	338	714	591	2,452	7,647	2,681	751	434	434
East South Central.....	223	412	276	224	1,114	399	106	340	310
West South Central.....	208	514	450	5,139	10,403	4,037	287	245	245
Mountain.....	67	83	79	574	2,219	659	330	683	738
Pacific.....	106	172	172	69	109	140	402	2,140	1,438
	Meningococcus meningitis			Poliomyelitis			Scarlet fever		
United States.....	250	397	397	1,581	932	755	7,051	10,714	10,714
New England.....	19	19	49	91	72	50	581	701	977
Middle Atlantic.....	54	98	98	167	158	155	1,339	1,765	1,814
East North Central.....	43	96	96	442	220	127	2,306	2,562	2,864
West North Central.....	25	35	35	372	116	60	528	981	1,105
South Atlantic.....	24	25	53	102	56	56	630	1,657	1,447
East South Central.....	20	40	40	53	39	39	403	734	734
West South Central.....	20	32	32	153	55	55	231	681	526
Mountain.....	8	8	11	51	30	20	285	409	409
Pacific.....	37	44	44	150	186	86	748	1,224	1,224
	Smallpox			Typhoid and paratyphoid fever			Whooping cough <sup>2</sup>		
United States.....	16	24	45	229	304	312	7,703	9,377	9,973
New England.....	0	0	0	21	23	15	1,020	1,317	1,287
Middle Atlantic.....	0	0	0	23	38	50	2,094	2,974	2,974
East North Central.....	5	8	11	26	31	32	2,282	2,027	2,466
West North Central.....	3	0	7	13	17	17	225	255	523
South Atlantic.....	1	2	2	29	49	49	814	949	1,186
East South Central.....	3	5	1	22	24	32	182	458	458
West South Central.....	3	4	4	52	74	74	627	494	526
Mountain.....	0	5	2	15	26	29	181	316	316
Pacific.....	1	0	1	28	22	17	278	587	737

<sup>1</sup> Mississippi and New York excluded; New York City included.

<sup>2</sup> Mississippi excluded.

## MORTALITY, ALL CAUSES

Deaths recorded for the 4 weeks ended November 30 in 93 large cities totaled 34,898, as compared with a preceding 3-year (1943-45) average of 35,940 deaths. During the third week of the 4-week period the number of cases was 4 percent above the average, but in each of the other 3 weeks the number of deaths was lower than the preceding 3-year average; during the last week (ended November 30) the number of deaths was more than 10 percent less than the 3-year average.

The birth rate (28.6 per 1,000 population) for the month of October was the highest since the establishment of the birth registration area in 1915. On the other hand, the general and infant mortality rates for October were the lowest in recent years.

## DEATHS DURING WEEK ENDED NOVEMBER 30, 1946

[From the Weekly Mortality Index, issued by the National Office of Vital Statistics]

	Week ended Nov. 30, 1946	Correspond- ing week, 1945
Data for 92 large cities of the United States:		
Total deaths.....	8,562	9,421
Average for 3 prior years.....	9,576	-----
Total deaths, first 48 weeks of year.....	430,644	428,288
Deaths under 1 year of age.....	725	673
Average for 3 prior years.....	662	-----
Deaths under 1 year of age, first 48 weeks of year.....	31,685	28,877
Data from industrial insurance companies:		
Policies in force.....	67,331,056	67,287,995
Number of death claims.....	10,600	13,337
Death claims per 1,000 policies in force, annual rate.....	8.2	10.3
Death claims per 1,000 policies, first 48 weeks of year, annual rate.....	9.4	10.0

# INCIDENCE OF DISEASE

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*No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring*

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## UNITED STATES

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### REPORTS FROM STATES FOR WEEK ENDED DECEMBER 7, 1946

#### Summary

A total of 242 cases of poliomyelitis was reported for the week, as compared with 262 last week and a 5-year (1941-45) median of 99. An increase occurred in the Middle Atlantic area (from 21 to 36 cases), and in the Pacific area (28 to 30 cases). Of 19 States reporting 5 or more cases each, 9 (all Middle Atlantic and North Central States except Virginia and Texas) reported an increase from 58 to 89 cases, while 8 (all in the North Central area except Massachusetts and Washington) showed a decline from 116 to 85. States reporting currently 10 or more cases each are as follows (last week's figures in parentheses): *Increases*—New York 25 (14), Michigan 17 (14); *decreases*—Illinois 26 (29); Minnesota 10 (15), Nebraska 10 (13). California reported 20 cases for each week. During the past 38 weeks, the period since the approximate average date of lowest seasonal incidence in past years, a total of 24,292 has been reported, as compared with 13,046 and 18,758 for the corresponding periods, respectively, of 1945 and 1944, and a 5-year median of 11,928.

Only a slight increase was reported for the current week in the incidence of influenza. A total of 2,813 cases was reported, as compared with 2,320 last week, 2,449 and 49,694, respectively, for the corresponding weeks in 1944 and 1945, and a 5-year median of 2,742. Since July 27, the approximate average date of lowest seasonal incidence, a total of 24,102 cases has been reported, as compared with 91,836 for the corresponding period last year and a 5-year median of 24,489.

Currently 401 cases of diphtheria were reported (last week 315), of which 34 occurred in Kentucky, 29 in New York, 28 in California, 25 in Virginia, 24 in Maryland, 23 in Ohio, and 20 in Mississippi, all representing increases over last week's figures. The total for the corresponding week last year was 528, and the 5-year median is 415.

A total of 9,716 deaths was recorded for the week in 93 large cities of the United States, as compared with 8,588 last week, 9,945 for the corresponding week last year, and a 3-year (1943-45) average of 9,910. The cumulative total is 441,814, as compared with 439,644 for the corresponding period last year.



*Telegraphic morbidity reports from State health officers for the week ended Dec. 7, 1946, and comparison with corresponding week of 1945 and 5-year median*

In these tables a zero indicates a definite report, while leaders imply that, although none was reported, cases may have occurred.

Division and State	Diphtheria			Influenza			Measles			Meningitis, meningococcus		
	Week ended—		Med- ian 1941- 45	Week ended—		Med- ian 1941- 45	Week ended—		Med- ian 1941- 45	Week ended—		Med- ian 1941- 45
	Dec. 7, 1946	Dec. 8, 1945		Dec. 7, 1946	Dec. 8, 1945		Dec. 7, 1946	Dec. 8, 1945		Dec. 7, 1946	Dec. 8, 1945	
NEW ENGLAND												
Maine.....	2	4	1	9	-----	-----	311	8	8	0	0	0
New Hampshire.....	0	2	0	1	-----	-----	4	25	8	1	0	0
Vermont.....	0	0	0	-----	-----	-----	163	4	4	1	0	0
Massachusetts.....	14	2	2	-----	-----	-----	161	213	213	4	3	6
Rhode Island.....	0	0	0	2	-----	1	14	-----	2	1	1	1
Connecticut.....	1	2	1	-----	3	2	55	6	16	3	2	3
MIDDLE ATLANTIC												
New York.....	29	19	16	14	15	18	268	227	295	6	13	13
New Jersey.....	8	3	3	6	19	10	72	30	25	3	3	5
Pennsylvania.....	11	12	11	6	21	5	470	447	447	4	9	10
EAST NORTH CENTRAL												
Ohio.....	23	41	17	11	94	14	128	15	36	3	4	4
Indiana.....	18	11	13	6	1,317	47	5	7	17	3	3	3
Illinois.....	4	7	7	1	38	14	16	244	69	4	16	12
Michigan <sup>1</sup> .....	10	8	8	2	2	2	10	190	39	2	1	1
Wisconsin.....	1	6	1	30	61	34	47	30	30	1	3	3
WEST NORTH CENTRAL												
Minnesota.....	9	6	6	-----	4	2	5	1	5	2	1	1
Iowa.....	3	10	4	-----	176	2	10	2	32	0	3	1
Missouri.....	11	10	6	2	42	14	-----	66	12	0	2	2
North Dakota.....	2	2	2	-----	277	10	1	4	4	0	1	0
South Dakota.....	0	0	1	-----	-----	-----	1	1	1	0	0	0
Nebraska.....	1	1	2	5	577	-----	9	10	9	1	1	0
Kansas.....	6	8	5	18	6,848	18	8	24	21	0	1	-----
SOUTH ATLANTIC												
Delaware.....	0	0	0	-----	11	-----	1	1	2	0	0	-----
Maryland <sup>1</sup> .....	24	12	10	2	27	8	12	7	7	1	1	4
District of Columbia.....	0	1	0	-----	3	3	-----	1	3	3	1	1
Virginia.....	25	43	21	422	3,993	371	61	61	61	6	2	4
West Virginia.....	5	6	6	42	3,395	20	42	-----	8	1	1	2
North Carolina.....	6	46	28	-----	-----	2	97	34	34	0	2	1
South Carolina.....	11	9	9	423	2,459	517	26	49	29	0	1	1
Georgia.....	15	23	17	16	253	116	39	4	4	1	6	2
Florida.....	12	4	4	8	6	6	15	3	3	4	3	2
EAST SOUTH CENTRAL												
Kentucky.....	34	13	13	-----	15,358	6	-----	122	22	0	3	2
Tennessee.....	7	15	11	25	299	40	4	4	20	0	3	3
Alabama.....	9	13	13	41	362	80	3	3	3	0	3	3
Mississippi <sup>1</sup> .....	20	20	12	-----	-----	-----	-----	-----	-----	1	2	1
WEST SOUTH CENTRAL												
Arkansas.....	15	21	15	39	785	117	13	19	22	2	5	1
Louisiana.....	4	20	9	1	50	13	1	10	3	0	1	1
Oklahoma.....	4	9	9	15	180	180	1	14	10	2	0	1
Texas.....	14	73	56	1,343	7,332	1,352	43	52	52	3	3	3
MOUNTAIN												
Montana.....	0	3	2	-----	129	21	25	6	52	0	1	1
Idaho.....	0	1	1	14	181	2	8	136	8	0	0	0
Wyoming.....	1	0	0	-----	72	11	4	9	9	0	0	0
Colorado.....	3	3	3	33	607	49	9	41	41	2	0	1
New Mexico.....	3	5	3	-----	3	-----	32	1	1	0	0	0
Arizona.....	1	2	1	261	323	127	33	5	5	2	0	0
Utah <sup>1</sup> .....	2	1	0	1	4,241	10	8	34	29	1	0	1
Nevada.....	0	0	0	-----	46	-----	-----	-----	1	0	0	0
PACIFIC												
Washington.....	5	4	5	-----	-----	1	17	259	43	2	1	1
Oregon.....	0	6	5	9	45	16	22	25	40	0	0	2
California.....	28	21	22	15	50	55	123	333	249	7	12	12
Total.....	401	528	415	2,813	49,694	2,742	2,397	2,787	3,998	77	118	118
49 weeks.....	15,178	17,272	14,643	214,299	160,734	160,734	655,433	121,089	580,588	5,465	7,618	7,618
Seasonal low week <sup>1</sup> .....	(27th) Jul. 5-11			(30th) Jul. 26-Aug. 1			(35th) Aug. 30-Sep. 5			(37th) Sep. 13-19		
Total since low.....	6,550	10,375	8,156	24,102	91,836	24,489	15,348	18,530	23,210	799	1,123	1,123

<sup>1</sup> New York City only.

<sup>2</sup> Period ended earlier than Saturday.

<sup>3</sup> Dates between which the approximate seasonal low week ends. The specific date will vary from year to year.

<sup>4</sup> Delayed report: Nebraska, meningococcus meningitis, week ended November 23, 1 case.

*Telegraphic morbidity reports from State health officers for the week ended Dec. 7, 1946, and comparison with corresponding week of 1945 and 5-year median—Con.*

Division and State	Polio-myelitis			Scarlet fever			Smallpox			Typhoid and para-typhoid fever <sup>1</sup>		
	Week ended—		Med-ian 1941-45	Week ended—		Med-ian 1941-45	Week ended—		Med-ian 1941-45	Week ended—		Med-ian 1941-45
	Dec. 7, 1946	Dec. 8, 1945		Dec. 7, 1946	Dec. 8, 1945		Dec. 7, 1946	Dec. 8, 1945		Dec. 7, 1946	Dec. 8, 1945	
NEW ENGLAND												
Maine.....	1	4	1	51	30	25	0	0	0	0	0	1
New Hampshire.....	1	0	0	0	6	6	0	0	0	0	0	0
Vermont.....	1	1	0	9	6	7	0	0	0	0	0	0
Massachusetts.....	5	5	4	140	122	244	0	0	0	5	2	2
Rhode Island.....	0	0	0	11	9	9	0	0	0	0	1	0
Connecticut.....	2	0	0	16	18	37	0	0	0	0	0	1
MIDDLE ATLANTIC												
New York.....	25	12	14	226	273	278	0	0	0	2	4	6
New Jersey.....	6	7	4	94	61	76	0	0	0	1	0	2
Pennsylvania.....	5	0	2	139	165	213	0	0	0	1	6	6
EAST NORTH CENTRAL												
Ohio.....	9	4	4	302	255	278	0	0	0	0	2	5
Indiana.....	9	2	0	88	65	65	0	1	4	4	0	1
Illinois.....	26	7	4	105	155	196	0	0	0	1	1	1
Michigan <sup>2</sup> .....	17	3	3	132	154	154	0	0	0	0	3	1
Wisconsin.....	8	15	1	59	113	140	0	0	0	1	1	1
WEST NORTH CENTRAL												
Minnesota.....	10	2	0	37	37	88	0	0	0	0	0	0
Iowa.....	4	0	0	37	46	52	0	0	0	0	0	0
Missouri.....	9	13	1	32	48	49	0	0	0	0	0	1
North Dakota.....	5	0	0	8	6	14	0	0	0	0	0	0
South Dakota.....	5	0	0	11	4	33	0	0	0	0	0	0
Nebraska.....	10	1	0	32	47	31	0	0	0	0	0	0
Kansas.....	9	3	3	30	66	88	1	1	1	0	1	1
SOUTH ATLANTIC												
Delaware.....	0	0	0	8	6	7	0	0	0	0	1	0
Maryland <sup>2</sup> .....	4	1	1	25	58	61	0	0	0	0	0	2
District of Columbia.....	2	2	0	2	20	20	0	0	0	0	0	0
Virginia.....	6	3	2	60	90	69	0	0	0	2	0	2
West Virginia.....	2	0	1	23	67	51	0	0	0	2	1	1
North Carolina.....	2	4	1	27	58	96	0	0	0	2	1	1
South Carolina.....	0	2	1	5	17	17	0	0	0	0	1	3
Georgia.....	2	3	1	17	28	34	0	0	0	2	3	4
Florida.....	1	3	0	5	13	13	0	0	0	2	1	1
EAST SOUTH CENTRAL												
Kentucky.....	0	1	2	29	58	58	0	0	0	1	1	1
Tennessee.....	1	2	1	27	53	58	0	1	0	0	3	3
Alabama.....	1	2	1	11	27	27	0	0	0	0	0	0
Mississippi <sup>2</sup> .....	4	3	0	17	19	19	0	0	0	1	0	1
WEST SOUTH CENTRAL												
Arkansas.....	2	2	2	10	22	6	0	0	0	2	2	2
Louisiana.....	2	5	1	0	39	14	0	0	0	1	3	3
Oklahoma.....	3	0	1	6	22	26	0	0	0	0	0	2
Texas.....	8	5	5	28	121	67	0	0	0	3	11	10
MOUNTAIN												
Montana.....	0	1	0	4	14	22	0	0	0	2	0	0
Idaho.....	1	0	0	26	27	27	0	4	0	0	0	0
Wyoming.....	0	1	0	2	1	3	0	0	0	0	0	0
Colorado.....	2	2	2	18	35	36	0	0	0	3	0	0
New Mexico.....	0	1	1	11	35	12	0	0	0	0	0	2
Arizona.....	1	1	0	16	27	9	0	0	0	0	0	0
Utah <sup>2</sup> .....	1	4	1	13	35	35	0	0	0	0	0	0
Nevada.....	0	0	0	0	0	2	0	0	0	0	0	0
PACIFIC												
Washington.....	7	20	7	35	38	38	0	0	0	4	0	0
Oregon.....	3	0	2	38	40	37	0	0	0	1	1	1
California.....	20	21	14	139	245	179	0	0	0	1	2	4
Total.....	242	168	99	2,161	2,901	3,091	1	7	12	44	52	79
49 weeks.....	24,758	13,443	12,230	106,885	164,899	131,727	327	333	716	3,876	4,720	5,306
Seasonal low week <sup>3</sup> .....	(11th) Mar. 15-21			(32nd) Aug. 9-15			(35th) Aug. 30-Sept. 5			(11th) Mar. 15-21		
Total since low.....	24,292	13,046	11,928	20,590	31,081	31,081	48	60	97	3,401	4,096	4,721

<sup>1</sup> Period ended earlier than Saturday.

<sup>2</sup> Dates between which the approximate seasonal low week end4. The specific date will vary from year to year.

<sup>3</sup> Including paratyphoid fever reported separately, as follows: Massachusetts 5 (salmonella infection); New York 1; Georgia 2; Florida 2; California 1.

<sup>4</sup> Correction: Poliomyelitis, Nebraska, week ended November 23, 8 cases (instead of 9).

Telegraphic morbidity reports from State health officers for the week ended Dec. 7, 1946, and comparison with corresponding week of 1945 and 5-year median—Con.

Division and State	Whooping cough			Week ended Dec. 7, 1946							
	Week ended—		Median 1941-45	Dysentery			Encephalitis, infectious	Rocky Mt. spotted fever	Tularemia	Typhus fever, endemic	Undulant fever
	Dec. 7, 1946	Dec. 8, 1945		Ame- bic	Bacil- lary	Un- spec- ified					
NEW ENGLAND											
Maine.....	13	41	36								
New Hampshire.....	17	26	8								
Vermont.....	16	23	30								
Massachusetts.....	182	150	150		2				2		1
Rhode Island.....	15	31	31								
Connecticut.....	58	73	73								1
MIDDLE ATLANTIC											
New York.....	261	320	345	9	11		1				4
New Jersey.....	192	164	164	7							1
Pennsylvania.....	163	180	165								5
EAST NORTH CENTRAL											
Ohio.....	119	201	152			1			2		3
Indiana.....	20	28	17						14		2
Illinois.....	100	127	127	4	1		1	1	13		9
Michigan.....	160	186	204	1	1				1		1
Wisconsin.....	225	99	135								5
WEST NORTH CENTRAL											
Minnesota.....	6	15	42	5							1
Iowa.....	49	6	22	1							16
Missouri.....	18	4	8						15		
North Dakota.....			10								
South Dakota.....		2	2								
Nebraska.....	18	16	2								
Kansas.....	4	11	27	1					4		13
SOUTH ATLANTIC											
Delaware.....	4	1	1								
Maryland.....	64	27	37	1					2		2
District of Columbia.....	4	5	8								
Virginia.....	84	54	54			33			3		3
West Virginia.....	26	26	26								
North Carolina.....	53	59	85						2	2	
South Carolina.....	30	74	44	3	1					2	
Georgia.....	15	27	9	1	5					9	3
Florida.....	37	5	10	1	1					7	2
EAST SOUTH CENTRAL											
Kentucky.....	1	51	51						1		
Tennessee.....	11	14	42	7					3	1	
Alabama.....	13	2	5							5	4
Mississippi.....										4	5
WEST SOUTH CENTRAL											
Arkansas.....	5	4	20	2					1		
Louisiana.....	1	1	2		1				2	3	1
Oklahoma.....	7	12	11								1
Texas.....	157	124	138	11	324	27			1	13	14
MOUNTAIN											
Montana.....	11	6	24								
Idaho.....		12	4								
Wyoming.....	6	1	2								
Colorado.....	6	32	31				1				3
New Mexico.....	5	2	2								
Arizona.....	6	6	11			25					
Utah.....	2	10	26								
Nevada.....											
PACIFIC											
Washington.....	10	48	48								
Oregon.....	11	18	18								
California.....	47	108	126	1	3		1			2	5
Total.....	2,252	2,432	2,675	55	350	86	4	1	66	48	105
Same week, 1945.....	2,432			30	310	98	8	1	35	112	68
Average, 1943-45.....	2,358			52	508	121	10	70	30	112	
45 weeks: 1946.....	93,755			2,310	15,742	6,107	592	567	962	3,263	5,038
1945.....	118,689			1,835	23,635	10,176	605	465	729	4,970	4,669
Average, 1943-45.....	127,040		7169,469	1,884	21,362	8,711	627	7453	687	74,304	

<sup>1</sup> Period ended earlier than Saturday.

<sup>2</sup> 5-Year median, 1941-45.

Anthrax: Massachusetts 1 case.

WEEKLY REPORTS FROM CITIES<sup>1</sup>

City reports for week ended Nov. 30, 1946

This table lists the reports from 82 cities of more than 10,000 population distributed throughout the United States, and represents a cross section of the current urban incidence of the diseases included in the table.

Division, State, and city	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Pollomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
NEW ENGLAND												
Maine:												
Portland.....	0	0	-----	0	4	0	2	1	5	0	0	-----
New Hampshire:												
Concord.....	0	0	-----	0	-----	0	0	0	0	0	0	-----
Vermont:												
Barre.....	1	0	-----	0	-----	0	0	0	0	0	0	-----
Massachusetts:												
Boston.....	7	0	-----	0	4	2	10	5	19	0	0	34
Fall River.....	0	0	-----	0	1	0	1	0	1	0	0	-----
Springfield.....	1	0	-----	0	7	0	2	0	0	0	0	16
Worcester.....	0	0	-----	0	4	0	16	1	3	0	0	25
Rhode Island:												
Providence.....	0	0	1	1	1	0	4	0	3	0	0	29
Connecticut:												
Bridgeport.....	0	0	-----	0	1	0	0	0	0	0	0	-----
MIDDLE ATLANTIC												
New York:												
Buffalo.....	0	0	-----	0	1	0	5	0	12	0	0	7
New York.....	16	0	1	0	7	9	57	6	41	0	1	45
Rochester.....	0	0	-----	0	-----	0	1	0	10	0	0	-----
Syracuse.....	0	0	-----	0	-----	0	1	0	3	0	0	23
New Jersey:												
Camden.....	0	0	-----	0	-----	0	0	0	0	0	0	1
Newark.....	0	0	-----	0	4	1	3	2	15	0	0	13
Trenton.....	0	0	-----	0	15	0	2	0	0	0	1	1
Pennsylvania:												
Philadelphia.....	1	0	4	0	3	0	13	1	18	0	0	52
Pittsburgh.....	4	0	1	0	175	2	9	0	12	0	0	3
Reading.....	0	0	-----	0	2	0	1	0	3	0	0	7
EAST NORTH CENTRAL												
Ohio:												
Cincinnati.....	1	0	-----	0	-----	0	1	2	8	0	0	3
Cleveland.....	0	0	4	0	38	1	2	4	22	0	0	22
Columbus.....	0	0	-----	0	3	0	6	2	11	0	0	3
Indiana:												
Indianapolis.....	0	0	-----	0	-----	0	4	1	12	0	0	6
South Bend.....	0	0	-----	0	-----	0	0	0	1	0	0	-----
Terre Haute.....	0	0	-----	0	-----	0	1	0	0	0	0	-----
Illinois:												
Chicago.....	1	0	1	1	6	6	21	9	36	0	0	52
Michigan:												
Detroit.....	5	0	-----	0	2	0	18	0	36	0	0	52
Flint.....	0	0	-----	0	-----	0	1	2	6	0	0	4
Grand Rapids.....	0	0	-----	0	-----	0	1	0	6	0	0	8
Wisconsin:												
Kenosha.....	1	0	-----	0	-----	0	0	0	2	0	0	-----
Milwaukee.....	0	0	-----	0	3	2	3	0	12	0	0	101
Racine.....	0	0	-----	0	-----	0	0	0	5	0	0	4
Superior.....	0	0	-----	0	1	0	0	0	1	0	0	-----
WEST NORTH CENTRAL												
Minnesota:												
Duluth.....	1	0	-----	0	1	0	0	0	1	0	0	2
Minneapolis.....	0	0	-----	1	3	1	2	2	5	0	0	-----
St. Paul.....	1	0	-----	0	-----	0	6	0	5	0	0	-----
Missouri:												
Kansas City.....	0	0	-----	0	-----	0	10	0	1	0	0	-----
St. Joseph.....	0	0	-----	0	-----	0	0	0	0	0	0	-----
St. Louis.....	2	0	-----	1	4	1	10	4	7	0	0	4

<sup>1</sup> In some instances the figures include non-resident cases.

## City reports for week ended Nov. 30, 1946—Continued

Division, State, and City	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Pollomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
WEST NORTH CENTRAL—continued												
Nebraska:												
Omaha.....	0	0	-----	0	-----	0	3	4	8	0	0	-----
Kansas:												
Topeka.....	0	0	-----	0	-----	0	0	1	2	0	0	-----
Wichita.....	0	0	-----	0	1	0	7	0	3	0	0	-----
SOUTH ATLANTIC												
Delaware:												
Wilmington.....	0	0	-----	0	-----	0	1	0	0	0	0	4
Maryland:												
Baltimore.....	8	0	2	1	2	0	7	2	5	0	0	27
Cumberland.....	0	0	-----	0	-----	0	0	0	1	0	0	-----
Frederick.....	0	0	-----	0	5	0	0	0	0	0	0	-----
District of Columbia:												
Washington.....	0	0	-----	0	1	1	5	0	3	0	0	1
Virginia:												
Lynchburg.....	0	0	-----	0	-----	0	1	0	0	0	0	-----
Richmond.....	0	0	-----	0	11	0	2	0	4	0	0	-----
Roanoke.....	0	0	-----	0	-----	0	0	0	2	0	0	-----
West Virginia:												
Wheeling.....	0	0	-----	0	-----	0	1	0	0	0	0	2
North Carolina:												
Raleigh.....	0	0	-----	0	-----	0	0	0	0	0	0	3
Wilmington.....	0	0	-----	0	7	0	1	0	0	0	0	-----
Winston-Salem.....	1	0	-----	0	11	0	1	0	9	0	0	-----
South Carolina:												
Charleston.....	0	0	7	0	3	0	0	0	0	0	0	-----
Georgia:												
Atlanta.....	0	0	-----	0	2	0	4	0	2	0	0	3
Brunswick.....	0	0	-----	0	2	0	1	0	0	0	0	4
Savannah.....	0	0	1	1	7	0	0	0	0	0	0	-----
Florida:												
Tampa.....	2	0	-----	0	-----	0	2	0	1	0	0	-----
EAST SOUTH CENTRAL												
Tennessee:												
Memphis.....	0	0	3	0	-----	0	5	2	2	0	0	4
Nashville.....	0	0	-----	1	-----	0	3	0	2	0	0	-----
Alabama:												
Birmingham.....	2	0	-----	0	1	0	1	0	2	0	0	-----
Mobile.....	1	0	3	0	-----	0	1	0	0	0	0	-----
WEST SOUTH CENTRAL												
Arkansas:												
Little Rock.....	1	0	-----	0	5	0	0	0	2	0	0	1
Louisiana:												
New Orleans.....	0	0	3	3	1	0	5	3	3	0	0	-----
Shreveport.....	0	0	-----	0	-----	0	0	0	0	0	1	-----
Texas:												
Dallas.....	0	0	-----	0	-----	0	3	0	5	0	0	3
Galveston.....	1	0	-----	0	-----	0	0	0	1	0	0	-----
Houston.....	1	0	-----	0	-----	1	5	3	0	0	0	1
San Antonio.....	5	0	-----	1	-----	0	4	0	2	0	1	6
MOUNTAIN												
Montana:												
Great Falls.....	0	0	-----	0	1	0	0	0	4	0	0	-----
Helena.....	0	0	-----	0	-----	0	0	0	0	0	0	-----
Missoula.....	0	0	-----	0	-----	0	1	0	0	0	0	6
Colorado:												
Denver.....	1	0	4	0	4	0	6	1	19	0	0	4
Pueblo.....	0	0	-----	0	-----	0	2	0	0	0	0	-----
Utah:												
Salt Lake City.....	0	0	-----	0	1	0	3	0	2	0	0	-----

## City reports for week ended Nov. 30, 1946—Continued

Division, State, and City	Diphtheria cases	Enecephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Polio-myelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
PACIFIC												
Washington:												
Seattle.....	0	0	-----	0	-----	1	2	1	0	0	0	2
Spokane.....	0	0	-----	0	6	0	1	2	0	0	0	-----
Tacoma.....	0	0	-----	0	-----	0	0	0	1	0	0	-----
California:												
Los Angeles.....	1	0	3	3	4	1	1	8	23	0	0	12
Sacramento.....	0	0	-----	0	-----	0	1	0	3	0	0	-----
San Francisco.....	1	0	1	0	3	0	4	0	9	0	0	4
Total.....	67	0	39	14	368	29	297	69	433	0	4	604
Corresponding week, 1945.....	94	-----	267	25	693	-----	356	-----	670	0	14	682
Average, 1941-45.....	91	-----	441	248	666	-----	425	-----	831	0	14	772

<sup>1</sup> 3-year average, 1943-45.

<sup>2</sup> 5-year median, 1941-45.

*Dysentery, amebic*.—Cases: Boston 1; New York 1; Philadelphia 1; Wichita 1.

*Dysentery, bacillary*.—Cases: Springfield, Mass., 2; Buffalo 1; New York 1; Charleston, S. C., 1.

*Dysentery, unspecified*.—Cases: Cincinnati 1; San Antonio 26.

*Typhoid fever*.—Cases: Chicago 1; Detroit 1; Birmingham 1.

*Typhus fever, endemic*.—Cases: New York 1; Kansas City 1; New Orleans 2; Houston 1.

**Rates (annual basis) per 100,000 population by geographic groups, for the 82 cities in the preceding table (estimated population, 1943, 33,721,600)**

	Diphtheria case rates	Enecephalitis, infectious, case rates	Influenza		Measles case rates	Meningitis meningococcus, case rates	Pneumonia death rates	Pollomyelitis case rates	Scarlet fever case rates	Smallpox case rates	Typhoid and paratyphoid fever case rates	Whooping cough case rates
			Case rates	Death rates								
New England.....	28.2	0.0	3.1	3.1	69	6.3	109.7	21.9	97	0.0	0.0	326
Middle Atlantic.....	9.7	0.0	2.8	0.0	96	5.6	42.6	4.2	53	0.0	0.0	70
East North Central.....	5.0	0.0	3.1	0.6	33	5.6	36.1	12.4	98	0.0	0.0	159
West North Central.....	8.0	0.0	0.0	4.0	18	4.0	76.4	22.1	64	0.0	0.0	12
South Atlantic.....	18.4	0.0	16.7	3.3	85	1.7	43.5	3.3	30	0.0	0.0	74
East South Central.....	17.7	0.0	35.4	5.9	6	0.0	59.0	11.8	35	0.0	0.0	24
West South Central.....	23.0	0.0	8.6	11.5	17	2.9	48.8	17.2	37	0.0	5.7	32
Mountain.....	8.5	0.0	34.2	0.0	51	0.0	102.6	8.5	214	0.0	0.0	85
Pacific.....	3.2	0.0	6.3	4.7	21	3.2	14.2	17.4	57	0.0	0.0	28
Total.....	10.4	0.0	6.0	2.2	57	4.5	46.1	10.7	67	0.0	0.6	94

## FOREIGN REPORTS

### CANADA

*Provinces—Communicable diseases—Week ended November 16, 1946.*—During the week ended November 16, 1946, cases of certain communicable diseases were reported by the Dominion Bureau of Statistics of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunsw- wick	Que- bec	On- tario	Mani- toba	Sas- katch- ewan	Al- berta	British Colum- bia	Total
Chickenpox.....		11	1	195	377	28	33	60	152	857
Diphtheria.....		5	1	31	13	3	1	1	2	57
German measles.....					15	2	1	3	2	23
Influenza.....					6	2				8
Measles.....		103		145	42	8	277	84	117	776
Mumps.....		6		31	240	23	70	32	89	491
Pollomyelitis.....		1		7	14				1	23
Scarlet fever.....		7	10	119	78	4	2	4	11	235
Tuberculosis (all forms).....		7	10	101	45	9	12	32		216
Typhoid and paraty- phoid fever.....			1	8	3				1	13
Undulant fever.....					1				1	2
Venereal diseases:										
Gonorrhea.....		9	17	74	102	30	29	31	102	394
Syphilis.....	3	9	1	94	89	18	9	7	38	268
Other forms.....									1	1
Whooping cough.....		6		34	51	2	8		5	106

### JAMAICA

*Notifiable diseases—4 weeks ended November 16, 1946.*—During the 4 weeks ended November 16, 1946, cases of certain notifiable diseases were reported in Kingston, Jamaica, and in the island outside of Kingston, as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Chickenpox.....	1	6	Leprosy.....		2
Diphtheria.....	3	2	Tuberculosis (pulmonary).....	28	63
Dysentery, unspecified.....	2	5	Typhoid fever.....	7	81
Erysipelas.....	1		Typhus fever (murine).....	1	

# **WORLD DISTRIBUTION OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER**

From medical officers of the Public Health Service, American consuls, international health organizations, and other sources. The reports contained in the following tables must not be considered as complete or final as regards either the list of countries included or the figures for the particular countries for which reports are given.

## **CHOLERA**

[C indicates cases]

NOTE.—Since many of the figures in the following tables are from weekly reports, the accumulated totals are for approximate dates.

Place		January- Septem- ber 1946	October 1946	November 1946—week ended—				
				2	9	16	23	30
ASIA								
Burma.....	C	1,288	1	37	81	18		
Bassein.....	C	29						
Moulmein.....	C	76		37	47	18		
Rangoon.....	C	23						
Ceylon.....	C	82	3			3		
China:								
Anhwei Province.....	C	2,739	4					
Chekiang Province.....	C	4,403	197					
Formosa, Island of.....	C	1,980						
Fukien Province.....	C	1,315	40					
Foochow.....	C	686	23					
Honan Province.....	C	1,634	20					
Hopeh Province.....	C	292						
Hunan Province.....	C	1,878	140					
Hupeh Province.....	C	357						
Ichang Province.....	C	147						
Kiangsi Province.....	C	1,554	40					
Kiangsu Province.....	C	<sup>1</sup> 9,197	21					
Shanghai.....	C	<sup>1</sup> 4,549	21	1				
Kwangsi Province.....	C	941						
Kwangtung Province.....	C	4,713	175					
Canton.....	C	1,970	32					
Hong Kong.....	C	504						
Kweichow Province.....	C	8						
Macao, Island of.....	C	2						
Shantung Province.....	C	21						
Szechwan Province.....	C	111	26					
Yunnan Province.....	C	17						
India.....	C	63,133	1,974	1,033				
Bombay.....	C			<sup>2</sup> 1		<sup>2</sup> 1		
Calcutta.....	C	1,767	48	8		12	8	
Chittagong.....	C	8						
Madras.....	C	3						
India (French).....	C	2						
Indochina (French):								
Cambodia.....	C	272	59					
Cochinchina.....	C	836						
Bien Hoa.....	C	24						
Chaudok.....	C	21						
Mytho.....	C	142	2					
Rachgia.....	C	1						
Saigon-Cholon.....	C	38						
Vinh-long.....	C	7						
Japan.....	C	1,196	4	3				
Korea (Chosen).....	C	<sup>2</sup> 11,351						
Malay States.....	C	234			6	3	2	
Manchuria.....	C	18,450						
Mongolia.....	C	16						
Siam (Thailand).....	C	3,396	124					
Bangkok.....	C	463	31	7	9	4	7	
Straits Settlements: Singapore.....	C	<sup>2</sup> 1						

<sup>1</sup> Includes imported cases.

<sup>2</sup> Imported.

<sup>3</sup> From the beginning of the outbreak in April or May to approximately Sept. 1, 1946.



## PLAGUE

[C indicates cases; P, present]

Place		January- September 1946	October 1946	November 1946—week ended—				
				2	9	16	23	30
AFRICA								
Algeria.....	C	2						
Bechuanaland.....	C	10	11					
Belgian Congo.....	C	128	2					
British East Africa:								
Kenya.....	C	31	7					
Uganda.....	C	12						
Egypt.....	C	216		1				
Alexandria.....	C	126						
Ismailiya.....	C	27						
Matariya.....	C	12						
Port Said.....	C	18		1				
Suez.....	C	32						
Libya: Tripolitania—Plague-infected rats.....		1						
Madagascar.....	C	160	17					26
Union of South Africa.....	C	2				3		
ASIA								
Burma.....	C	1,151	95	29	38			
Bassein.....	C	23						
Rangoon.....	C	146	8					
China:								
Chekiang Province.....	C	702	8					
Formosa, Island of.....	C	11						
Fukien Province.....	C	4,365						
Amoy.....	C	307						
Foochow.....	C	1,399						
Kiangsi Province.....	C	260	7					
Kwangtung Province.....	C	415						
Yunnan Province.....	C	276	4					
India.....	C	14,484	832	284				
Indochina (French): Cochinchina.....	C	48						
Java.....	C	32	2		1		2	
Manchuria.....	C	52						
Palestine.....	C	16						
Siam (Thailand).....	C	23	4					
EUROPE								
Great Britain: Malta, Island of.....	C	6						
Portugal: Azores.....	C	15						
NORTH AMERICA								
Canada. <sup>5</sup>								
SOUTH AMERICA								
Argentina:								
Buenos Aires. <sup>6</sup>								
Cordoba Province.....	C		1					
Bolivia:								
Chuquisaca Department.....	C	1						
Santa Cruz Department.....	C	12						
Tarija Department—Plague-infected rats.....		P						
Brazil:								
Alagoas State.....	C	2						
Bahia State.....	C	32						
Ceara State.....	C	44						
Parahyba State.....	C	18						
Pernambuco State.....	C	35						
Ecuador:								
Chimborazo Province.....	C	2						
Loja Province.....	C	15	13					
Peru:								
Lambayeque Department.....	C	14						
Lima Department.....	C	19						
Piura Department.....	C	15						
Tumbes Department.....	C	1						
Plague-infected rats.....			P					
OCEANIA								
Hawaii Territory: Plague-infected rats.....		76						

<sup>1</sup> Includes 16 cases of pneumonic plague.<sup>2</sup> Pneumonic plague.<sup>3</sup> For the month of November 1946.<sup>4</sup> Includes 2 cases of pneumonic plague.<sup>5</sup> The imported suspected case previously reported has not been confirmed. Under date of Sept. 14, 1946, plague infection was reported in a pool of fleas from squirrels in Alsask and in a pool of fleas from squirrels in Superb, Saskatchewan.<sup>6</sup> Under date of Dec. 3, 1946, 9 cases of plague with 3 deaths were reported in a distant area of the port zone of Buenos Aires, Argentina, and on Dec. 4, 1946, an additional case was reported.<sup>7</sup> Plague infection was also proved in Hawaii Territory as follows: On Feb. 5, 1946, in a pool of 29 rats; on Apr. 13, 1946, in a pool of 54 fleas and 15 lice recovered from 7 rats and 22 mice; under date of July 3, 1946, in a pool of 50 fleas recovered from 7 rats and 46 mice, and in a pool of 51 fleas recovered from 10 rats; under date of July 17, 1946, in a pool of 48 fleas recovered from 22 rats, and in a pool of 56 fleas recovered from 33 rats; under date of Sept. 12, 1946, in a pool of 48 fleas recovered from 22 rodents; under date of Oct. 9, 1946, in a pool of 36 rats found on Sept. 10, 1946.

## SMALLPOX

[C indicates cases; P, present]

Place	January- September 1946	October 1946	November 1946—week ended—				
			2	9	16	23	30
AFRICA							
Algeria.....	C 253	5					
Angola.....	C 4						
Basutoland.....	C 46						
Bechuanaland.....	C 11						
Belgian Congo.....	C 12,911	165		44			
British East Africa:							
Kenya.....	C 779	30	8	6	29		
Nyasaland.....	C 408	152	77	80			
Tanganyika.....	C 5,108	360	144				
Uganda.....	C 536	22					
Cameroon (French).....	C 69	4		1			
Dahomey.....	C 1,523	47					
Egypt.....	C 380	4					
Eritrea.....	C 23						
French Equatorial Africa.....	C 161	1					
French Guinea.....	C 852	57					
French West Africa: Dakar District.....	C 40						
Gambia.....	C 7						
Gold Coast.....	C 1,003	37	83				
Ivory Coast.....	C 1,319	63					
Liberia.....	C 40						
Libya.....	C 324	152	90	41	29	22	
Madagascar.....	C 1						
Mauritania.....	C 1						
Morocco (French).....	C 1,841	13					
Morocco (Int. Zone).....	C 175						
Morocco (Spanish).....	C 5						
Mozambique.....	C 4						
Nigeria.....	C 5,828	207					
Niger Territory.....	C 452	20					
Rhodesia:							
Northern.....	C 393	14					
Southern.....	C 9	2				2	
Senegal.....	C 95						
Sierra Leone.....	C 407						
Somaliland (Italian).....	C 1						
Sudan (Anglo-Egyptian).....	C 52	1	3				
Sudan (French).....	C 1,958	25					
Togo (French).....	C 232						
Tunisia.....	C 33						
Union of South Africa.....	C 257	P	P	P	P		
ASIA							
Arabia.....	C 1	1					
Burma.....	C 1,734	25	18	9	13		
Ceylon.....	C 360	142					
China.....	C 926	226	98	167	217	196	207
India.....	C 57,378	392	146				
India (French).....	C 3						
India (Portuguese).....	C 27						
Indochina (French).....	C 1,793	221					
Iran.....	C 24						
Iraq.....	C 8					7	7
Japan.....	C 17,656	5	8	13			
Malay States.....	C 613	1,053	164	58	136	69	226
Palestine.....	C 2						
Rhodes, Island of.....	C 1						
Siam (Thailand).....	C 16,634	616					
Straits Settlements.....	C 69			5	71	14	18
Syria and Libanon.....	C 8						
Turkey (see Turkey in Europe).							
EUROPE							
Czechoslovakia.....	C 24						
France.....	C 15				1		
Germany.....	C 1						
Gibraltar.....	C 3						
Great Britain:							
England and Wales.....	C 53						
Malta, Island of.....	C 10						
Scotland.....	C 2						

See footnotes at end of table.

## SMALLPOX

Place	January- Septem- ber 1946	October 1946	November 1946—week ended—				
			2	9	16	23	30
EUROPE—continued							
Greece..... C	114						
Italy..... C	483						
Portugal..... C	54			1			
Spain..... C	7						
Turkey..... C	16						
Yugoslavia..... C	1						
NORTH AMERICA							
Canada..... C	2						
Guatemala..... C	55						
Honduras..... C	4						
Mexico..... C	377	19					
Nicaragua..... C	3						
SOUTH AMERICA							
Argentina..... C	68	1					
Bolivia..... C	874						
Brazil..... C	1 282	17					
Colombia..... C	739	88					
Ecuador..... C	47	7					
Paraguay..... C	1 264	2					
Peru..... C	451						
Uruguay..... C	40						
Venezuela..... C	1 858	1 38		1 10	1 395	1 287	
OCEANIA							
Hawaii Territory..... C	1						

<sup>1</sup> Includes alastim.<sup>2</sup> Includes delayed reports.<sup>3</sup> Imported.<sup>4</sup> Includes imported cases.<sup>5</sup> Off-shipping.

## TYPHUS FEVER\*

[C indicates cases; P, present]

<b>AFRICA</b>								
Algeria.....	C	778	5					
Basutoland.....	C	7						
Belgian Congo <sup>1</sup> .....	C	2,373	51		43			
British East Africa: Kenya <sup>1</sup> .....	C	21						
Egypt.....	C	1,346	31	4			1	
Eritrea.....	C	741	316	24	48			
French West Africa: Dakar District.....	C	7						
Libya.....	C	83	2	1			2	
Morocco (French).....	C	3,676	28					
Morocco (Int. Zone).....	C	53						
Morocco (Spanish).....	C	25						
Nigeria.....	C	28	3					
Rhodesia, Northern.....	C	1						
Sierra Leone <sup>1</sup> .....	C	5						
Tunisia <sup>1</sup> .....	C	183						
Union of South Africa <sup>1</sup> .....	C	357	5					
<b>ASIA</b>								
Arabia <sup>2</sup> .....	C	2						
Burma <sup>2</sup> .....	C	2						
China <sup>1</sup> .....	C	438						
India.....	C	298						
Indochina (French).....	C	61						
Iran.....	C	137						
Iraq.....	C	182	14	3			1	1
Japan.....	C	30,726	36	5	21			
Malay States.....	C	3						
Palestine <sup>2</sup> .....	C	73						
Philippine Islands <sup>2</sup> .....	C	3						
Straits Settlements.....	C	1	1					
Syria and Lebanon.....	C	78						
Trans-Jordan.....	C	21						
Turkey. (See Turkey in Europe.)								

See footnotes at end of table.

## TYPHUS FEVER\*

Place	January- Septem- ber 1946	October 1946	November 1946—week ended—				
			2	9	16	23	30
EUROPE							
Albania.....	C	96					
Austria.....	C	34	1				
Belgium <sup>1</sup> .....	C	14					
Bulgaria.....	C	973	6	18	6		
Czechoslovakia <sup>1</sup> .....	C	785					
France <sup>1</sup> .....	C	16					
Germany.....	C	1,867	1				
Great Britain:							
England and Wales.....	C	1					
Malta and Gozo <sup>1</sup> .....	C	21	1				
Greece <sup>1</sup> .....	C	517	33	15	14		5
Hungary.....	C	848	94	32	6	18	
Italy.....	C	24					
Netherlands <sup>1</sup> .....	C	24					
Poland.....	C	3,234	51	25	3	15	
Portugal.....	C	9	1				
Rumania.....	C	7,653	44		45		
Spain.....	C	26					
Canary Islands.....	C	2					
Sweden <sup>1</sup> .....	C	1					
Switzerland <sup>1</sup> .....	C	1	1				
Turkey.....	C	1,171	61	11	10	14	34
Union of Soviet Socialist Republics:							
Ukraine.....	C	P					
Yugoslavia.....	C	2,920			5	12	
NORTH AMERICA							
Costa Rica <sup>1</sup> .....	C	76	1				
Cuba <sup>1</sup> .....	C	20					
Guatemala.....	C	654					
Jamaica <sup>1</sup> .....	C	35	1		1		
Mexico.....	C	1272	197				
Panama Canal Zone.....	C	1					
Panama (Republic).....	C	2					
Puerto Rico <sup>1</sup> .....	C	86	7	3			
Virgin Islands <sup>1</sup> .....	C	3					
SOUTH AMERICA							
Argentina.....	C	5					
Bolivia.....	C	248					
Brazil.....	C	5	1				
Chile.....	C	414					
Colombia.....	C	395	72				
Curacao <sup>1</sup> .....	C	1					
Ecuador <sup>1</sup> .....	C	877	89				
Paraguay.....	C	1					
Peru.....	C	783					
Venezuela <sup>1</sup> .....	C	93	8				
OCEANIA							
Australia <sup>1</sup> .....	C	140					
Hawaii Territory <sup>1</sup> .....	C	57	18		2	2	

\*Reports from some areas are probably murine type, while others probably include both murine and louse-borne types.

<sup>1</sup> Includes cases of murine type.

<sup>2</sup> Murine type.

## YELLOW FEVER

[C indicates cases; D, deaths]

Place	January, September 1946	October 1946	November 1946—week ended—				
			2	9	16	23	30
AFRICA							
French Equatorial Africa: Carnot.....	C	-----	-----	-----	-----	1	1 2
Ivory Coast: Seguela.....	C	-----	-----	-----	1 1	-----	-----
Nigeria:							
Ibadan.....	C	1	-----	-----	-----	-----	-----
Ilorin.....	C	1	-----	-----	-----	-----	-----
Kafanchan.....	C	2	-----	-----	-----	-----	-----
Ogbomosho.....	C	41	-----	-----	-----	-----	-----
Sierra Leone: Pujehan.....	C	1	-----	-----	-----	-----	-----
SOUTH AMERICA							
Bolivia: Santa Cruz Department.....	D	1 40	-----	-----	-----	-----	-----
Brazil: Para State.....	D	1	-----	-----	-----	-----	-----
Colombia:							
Caqueta Territory.....	D	1	-----	-----	-----	-----	-----
Magdalena Department.....	D	1	-----	-----	-----	-----	-----
Santander Department.....	D	6	-----	-----	-----	-----	-----
Peru: San Martin Department.....	D	3	-----	-----	-----	-----	-----
Venezuela:							
Tachira State.....	C	4	-----	-----	-----	-----	-----
Trujillo State.....	C	4	-----	-----	-----	-----	-----
Zulia State.....	C	4	-----	-----	-----	-----	-----

<sup>1</sup> Suspected.<sup>2</sup> Diagnosis confirmed in 14 cases and 10 deaths.

X